# HARSHIT SOHANEY

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# **EXPERIENCE**

## Back-End Software Engineer Co-op | Mozilla Corp.

May 2023 - Present

- Implemented the spec for **Storage Access API** by upgrading storage access from per page to per frame, strengthening cross-site tracking security on Firefox
- Revamped the front-end & back-end for the clear browsing data process that improved user experience over controlling their privacy on the internet
- Improved Firefox privacy features including **Fingerprinting**, **Total Cookie Protection and Data Sanitization** to build trust amongst users

# Application Developer Co-op | Softchoice Corp.

May 2022 - Aug 2022

- Optimized API logging tables with Object Relational Mapping using LINQ to SQL queries and improved access time from 30 seconds to 2 seconds
- Improved the front-end & back-end for **Single Page Applications** on Softchoice's portal using .**NET Core and C#** to help users navigate items efficiently
- Implemented a planning interface by creating APIs to assist in determining development time and creating tasks for internal developer tooling

## **PROJECT HIGHLIGHTS**

#### **Syllabyte** | Personal Project/Founder

May 2023 - Present

- Developed a personalized studying application to help students with ADHD tackle **time dysmorphia** and **decision paralysis** during the school year
- Designed an API architecture using **Django** and created a heuristics-based **recommendation algorithm** that sorts course tasks in order of importance
- Researched an AI based **PDF scanning** feature to automate task inputting which is predicted to save users **2-4 hours** in to-do list maintenance

#### **Moodlist** | Deep Learning Project

Oct 2022 - Jan 2023

- Designed and trained a mood classifier based on a user's music history to personalize recommendations using **PyTorch**, **NumPy**, and the **Spotify API**
- Improved the pipeline of **Feature Engineering** by developing a data cleaning workflow to process a playlist data set of 1 million items with 5 GBs of data
- Engineered a **Recurrent Neural Network** architecture with an accuracy of 75% in predicting a user's mood

## **GIS Mapping System** | University of Toronto ECE297

Jan 2022 - May 2022

- Developed a navigation system using OpenStreetMap with C++ and improved panning/movement speed by 98%
- Applied algorithms such as **Dijkstra** and **A\*** to optimize path-finding and included features such as directions, transit and auto complete search bar
- Employed heuristic algorithms such as 2-opt and Simulated Annealing, along with techniques like multi-threading, to find an optimum solution to the Travelling Salesman Problem

## **ACHIEVEMENTS**

- Second Place Prize winner against 200+ participants at NewHacks 2022
- **Second Place Prize** winner against 20 teams at ENACTUS UofT Innovation Pitch Competition for a social venture

#### **EDUCATION**

# **Bachelor of Applied Science**

in Computer Engineering

#### **University of Toronto**

Sept 2020 - May 2025

- Minor in Artificial Intelligence
- Dean's Honor List 2020 2023
- **Teaching Assistant** Operating Systems ECE344 2023

#### Courses

Data Structures & Algorithms, Operating Systems, Intro to Deep Learning, Probability & Statistics, Ethics of Al, Computer Networks

## **Clubs & Positions**

UofT Musical Design - Founder/Copresident, UofT AI - Director of ProjectX, UofTHacks - Web-dev executive uofthacks.com, Learn AI - Curriculum Content Lead, ECE Club - Events Director, Performing Musician

## **TECHNICAL SKILLS**

#### **Programming**

#### Languages

C/C++ Python SQL C#
Java

# Web

JavaScript TypeScript

TCP/IP Network C React

Django jQuery

#### Skills

Agile Development SCRUM

Software Communication

#### **Machine Learning**

PyTorch Numpy TensorFlow

NLTK Matplotlib Pandas

#### **Software and Frameworks**

OOP Git .NET Development MVC GCP